From: **Lora Werner/R3/USEPA/US**
Sent: 3/16/2012 3:04:16 PM

To: Richard Rupert/R3/USEPA/US
CC:
Subject: Re: link to document

all interesting Rich - thanks.

like that Powell quote, smile.

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From: Richard Rupert/R3/USEPA/US
To: Lora Werner/R3/USEPA/US@EPA
Cc: Robert Helverson/R3/USEPA/US@EPA
Date: 03/16/2012 02:54 PM
Subject: Re: link to document

The wells in Dimock are in bedrock but often they do not set the case in the bedrock. I have been told by drillers and others up there, that to increase production they back off setting the case into the bedrock. The allows water collect on the bedrock surface and run in to the well. The paper is important to me because it shows a couple things including variability and high metals/contaminants in the glacial drift and Catskill. Though lithium may not be mentioned I would assume its behavior is similar to As, except Li has only two oxidation states, while As has five. I am guessing this could make As more variable in concentration over time in the groundwater. It also makes it harder to treat.

I haven't focused on Li yet nor do I think we will find much on it. I'll look more at this weekend and update you later....

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"The commander in the field is always right and the rear echelon is wrong, unless proved otherwise."
Colin Powell

From: Lora Werner/R3/USEPA/US
To: Richard Rupert/R3/USEPA/US
Cc: Robert Helverson/R3/USEPA/US@EPA
Date: 03/16/2012 02:34 PM
Subject: Re: link to document

Thanks Rich - this was interesting. I was thinking you had found a well with variable lithium results though, this is for all the usual normal analytes we see UGSG reports on though and didn't seem to have lithium in it at all, unless I missed it. I am guessing the variability in the arsenic concentrations described on p.38 is because this is a relatively shallow well in alluvium and not bedrock like the wells we are dealing with in Dimock etc right? L

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From: Richard Rupert/R3/USEPA/US
To: Robert Helverson/R3/USEPA/US@EPA, lora.werner@epa.gov
Date: 03/15/2012 01:53 PM
Subject: link to document

http://pubs.usgs.gov/sir/2006/5263/pdf/sir2006-5263.pdf

check out page 38 for :
Valley Settings
Arsenic contamination in Chapman State Park was documented in the repeated sampling of well Wr-576. This valley well (total depth of 59 ft) is finished in an alluvium hydrogeologic unit. The following data illustrate the persistence and variability in arsenic concentration over time.

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